symptoms did not provide additive predictive information for future shocks among ICD patients. More data is needed to explore further the elevation in risk among Class III-IV CHF patients.

1064-2

Implication of MADIT-II on Unselected Patients Following an Acute Myocardial Infarction

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Background: In the Multicenter Automatic Defibrillator Implantation Trial II (MADIT-II) the prevalence of increased QRS interval (>=0.12 sec) was 50%.
Increased QRS interval was associated with a trend towards an increased relative risk reduction of ICD treatment. We have therefore studied the prevalence of bundle branch block (BBB) in consecutive patients with myocardial infarction (MI) eligible for MADIT-II and the risk of sudden cardiac death in patients eligible for MADIT-II.
Methods: Consecutive MI patients screened for TRACE in 1990-1992 were entered into a registry. MADIT-II selection criteria were applied (ejection fraction <=30%, NYHA functional class I to III). Sudden cardiac death (SCD) was defined as cardiovascular death within one hour of symptoms. The hazrad ratio was estimated by Cox regression analysis.
Results: Of the 5983 register patients alive at discharge 1009 patients (17%) fulfilled the MADIT-II criteria. Over a mean follow-up of 2.0 years 180 patients experienced SCD and 227 non-sudden cardiac death. BBB was present in only 16% of the patients. BBB was associated with an increased risk of SCD, hazard ratio 1.50, P<0.05.
Conclusion: The frequency of sudden death in unselected MI patients eligible for Madit II is high and we further confirm the increased potential of benefit in patients with bundle branch block. Bundle branch block is much more rare in unselected patients than in patients enroled into Madit II.

1064-3

β-Blocker Reduces the Incidence of Appropriate Defibrillator Therapy in Patients With Congestive Heart Failure Secondary to Idiopathic Dilated Cardiomyopathy

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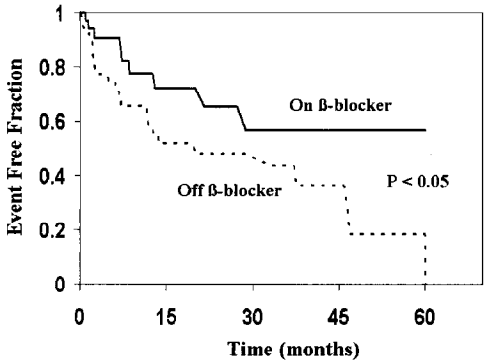
Background: β-Blockers (BB) have been shown to reduce the total mortality and sudden cardiac death rates in patients with congestive heart failure (CHF). However, the effects of BB on the incidence of defibrillator (ICD) therapy in patients with CHF secondary to idiopathic dilated cardiomyopathy (IDCM) remain unknown.
Methods and Results: Eighty-two patients (aged 51±16 years) with IDCM who were treated with ICDs were enrolled in this study. Their left ventricular ejection fraction (LVEF) was 25±9%. These patients were regularly followed for a period of up to 60 months (mean 24 months). These patients received frequent appropriate (39%) and inappropriate (35%) ICD therapy. The first appropriate ICD therapy occurred at 7.8 months (median). There was no significant difference between patients on (n=35) and off BB in age (50±17 vs 52±15 years, p>0.05), LVEF (27±10% vs 24±8%, p>0.05), or incidence of documented spontaneous or inducible sustained ventricular tachycardia / fibrillation before implantation (39% vs 37%, p>0.05). Fewer patients on BB were treated with amiodarone (14% vs 34%, p = 0.07). The incidence of appropriate ICD therapy was significantly lower in patients on BB than those off BB (26% vs 49%, log rank p<0.05; Figure). BB therapy was associated with a 47% reduction in appropriate ICD therapy in these patients.
Conclusion : BB therapy may substantially reduce the incidence of appropriate ICD therapy in patients with CHF secondary to IDCM.



1064-4

Prevalence of Patients With Myocardial Infarction and Reduced Left Ventricular Ejection Fraction: Impact of MADIT-II Study in the General Population

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Background: The second Multicenter Automatic Defibrillator Implantation trial (MADIT II) showed that defibrillators reduce all-cause mortality in patients with myocardial infarction (MI) and low left ventricular ejection fraction (LVEF≤30). Precise estimates of the prevalence of patients who meet MADIT II criteria could assist the assessment of the clinical and financial impact of the trial results.
Methods: We used the resources of the Marshfield Epidemiological Study Area (MESA), a well defined geographic region in which Marshfield Clinic and St. Joseph's hospital provide nearly all health care among its 60,000 residents. Codes 410-410.92 from the 9th edition of International Classification of Diseases were used to screen among current adult (≥ 21 years) MESA residents that have survived a MI between January 1979 and February 2002. The entire medical record of each potential case was then reviewed to confirm MADIT II eligibility criteria: documented MI and LVEF ≤ 30 %. Population prevalence was calculated by age and gender using established MESA population denominators.
Results: Of 1221 adults identified in the screening as having survived a MI, 1126 (92%) were confirmed by review of medical records. In those remaining, 112 (10%) patients were shown to have an LVEF ≤ 30%. The 112 patients include 77 (69%) men and 71 (63%) that are age 75 or older. Among adult MESA residents, the overall population prevalence of surviving an MI and having an LVEF ≤ 30 % is 2.6 per 1,000 individuals (95% confidence interval 2.1-3.1). The prevalence per 1,000 was 3.6 among men and 1.6 among women. Prevalence rates ranged from <1 per 1,000 among those <55 years old to 21.7 per 1,000 in persons >85 years.
Conclusions: In MESA, nearly 10% of all patients with history of a MI meet MADIT II criteria for defibrillator implantation. If our findings were applicable to the entire US population, we estimate there are 460,000 individuals in the United States that may benefit from this technology. Further research is needed to determine whether the benefits experienced by the MADIT II study patients are generalizable to all individuals in the general population who meet the study criteria.

1064-5

Are the Results of the Multicenter Automatic Defibrillator Implantation Trial-II Applicable to Patients Seen at a Tertiary Referral Center?

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Background: Some physicians have questioned the applicability of the results of the recently published Multicenter Automatic Defibrillator Implantation Trial-II (MADIT-II) to their patients. The purpose of this study is to determine the generalizability of the MADIT-II results.
Methods: We used the Duke Cardiovascular Disease Database that has systematically collected the baseline characteristics and long-term follow-up of all patients who undergo a cardiac catheterization at our institution. We explored the baseline characteristics of patients who met the MADIT-II inclusion criteria and examined their survival without an implantable cardioverter defibrillator (ICD). We estimated their life expectancy by assuming a Weibull distribution. The impact of ICD's on life expectancy was determined by the relative risk reduction observed in MADIT-II assuming that the survival benefit from an ICD is constant over time.
Results: Of patients undergoing cardiac catheterization between 1986 and 2001, 1392 (2.7%) met the MADIT-II inclusion criteria. Our patients were similar to the MADIT-II patients in age (64 years, 25th and 75th percentiles of 55 and 71 years), ejection fraction (25%, 25th and 75th percentiles of 20% and 28%), history of hypertension, and history of diabetes. Our patients were less often male, less often smokers, and less often had left bundle branch block. Our patients were less likely to have symptomatic congestive heart failure and to have had revascularization procedures. After 3 years of follow-up, the Kaplan-Meier survival estimates for the Duke cohort and the conventional arm of the MADIT-II population were very similar (66% vs. 69%). Applying the observed benefit from an ICD in MADIT-II to our population showed that their extrapolated survival estimate was slightly lower than the observed survival estimate for the MADIT-II ICD arm (75% vs. 78%). Our patients' mean life expectancy was 7.5 years without an ICD and 11.2 years with an ICD.
Conclusions: Our patients' baseline characteristics and survival pattern were similar to those of patients enrolled in MADIT-II. As such, the results of MADIT-II seem to be applicable to patients seen at a tertiary referral center.

1064-6

Antiarrhythmic Agents May Decrease Long-Term Survival in Patients With Implantable Defibrillators

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Antiarrhythmic agents are increasingly used for arrhythmia control and to reduce the incidence of shocks in patients receiving Implantable defibrillators (ICD). The effect of these drugs on long-term survival of ICD patients is unknown. We constructed a database of 1037 consecutive ICD implants performed at our institution from February 1980 to September 1999. Baseline variables collected included; demographics implant indication, NYHA functional class, cardiac diagnosis, co morbidity, discharge medication, echocardiography and angiography results. Details of discharge antiarrhythmic drug was available in 796 patients (78%), 434 (57%) received antiarrhythmic on discharge (157 on class I and 257 on class III) and 392 (43%) were discharged on no drug therapy. 46% of